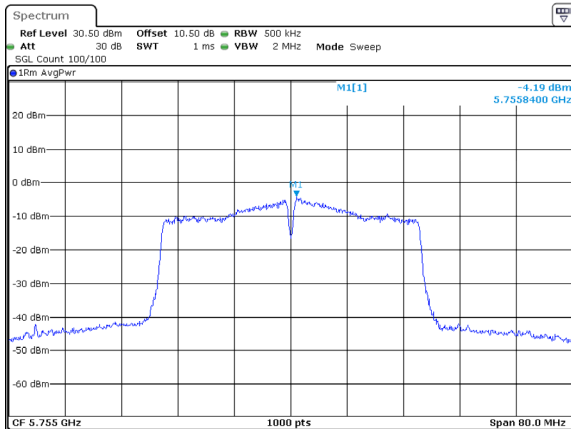
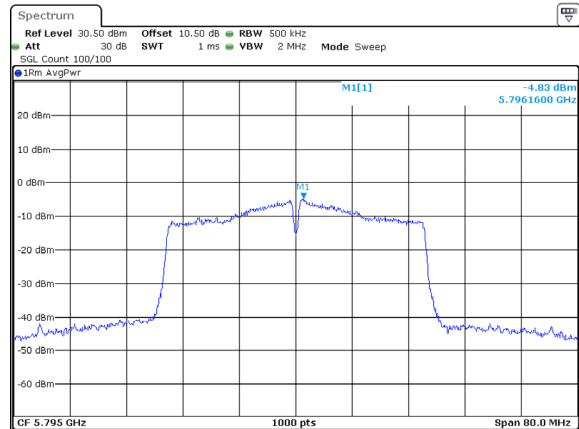


802.11ac40\_5755MHz\_Chain 2



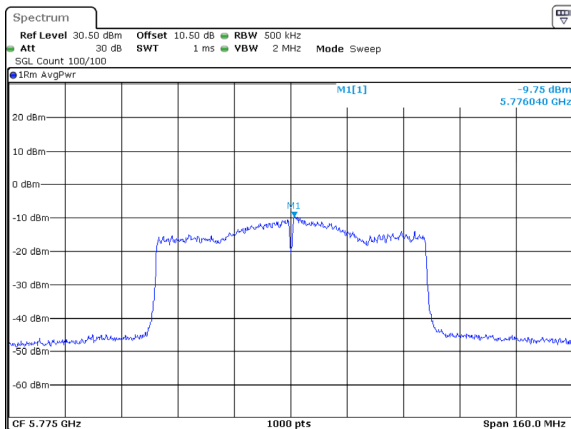
ProjectNo.:2401T33438E-RF Tester:Brian Li  
Date: 1.APR.2025 23:35:48

802.11ac40\_5795MHz\_Chain 2



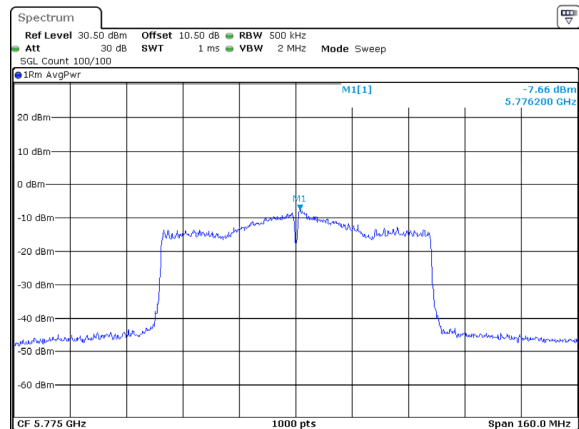
ProjectNo.:2401T33438E-RF Tester:Brian Li  
Date: 1.APR.2025 23:37:05

802.11ac80\_5775MHz\_Chain 1



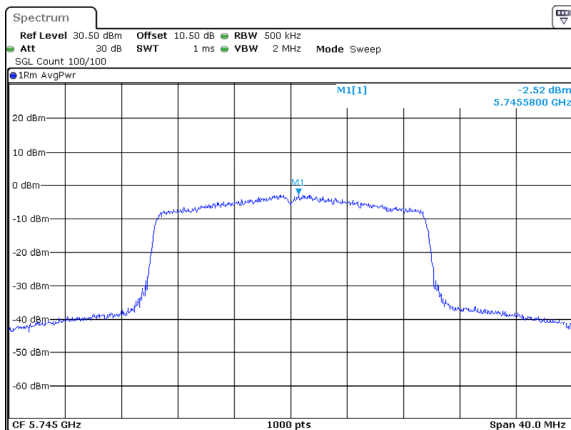
ProjectNo.:2401T33438E-RF Tester:Brian Li  
Date: 1.APR.2025 22:10:26

802.11ac80\_5775MHz\_Chain 2



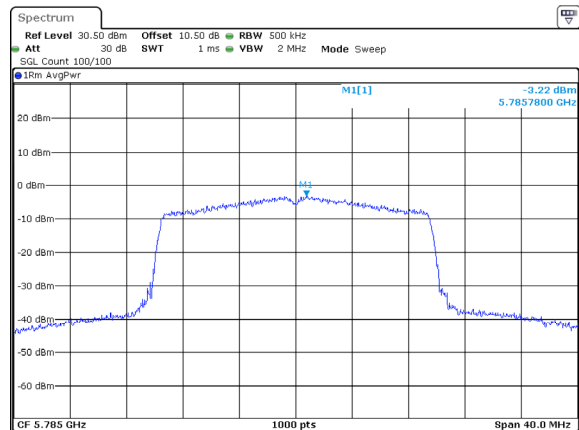
ProjectNo.:2401T33438E-RF Tester:Brian Li  
Date: 1.APR.2025 23:37:36

802.11ax20\_5745MHz\_RU\_Full\_Chain 1



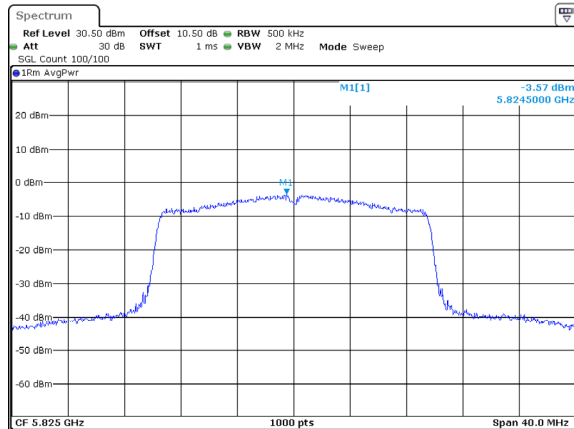
ProjectNo.:2401T33438E-RF Tester:Brian Li  
Date: 1.APR.2025 22:11:44

802.11ax20\_5785MHz\_RU\_Full\_Chain 1



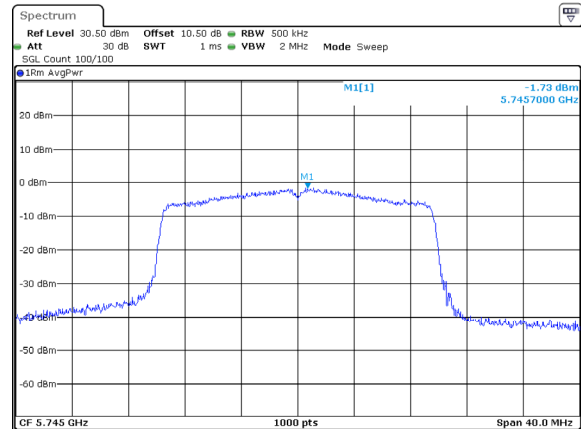
ProjectNo.:2401T33438E-RF Tester:Brian Li  
Date: 1.APR.2025 22:13:43

802.11ax20\_5825MHz\_RU\_Full\_Chain 1



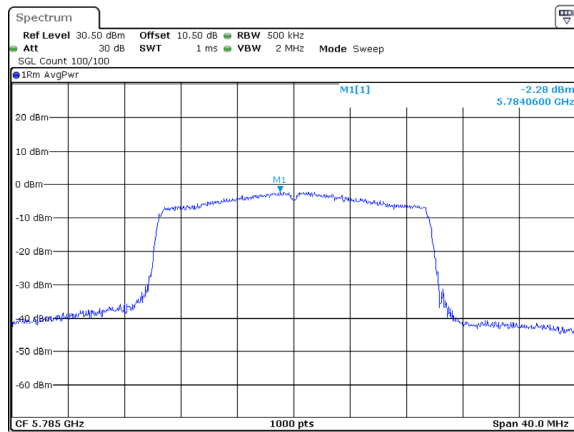
ProjectNo.:2401T33438E-RF Tester:Brian Li  
Date: 1.APR.2025 22:19:15

802.11ax20\_5745MHz\_RU\_Full\_Chain 2



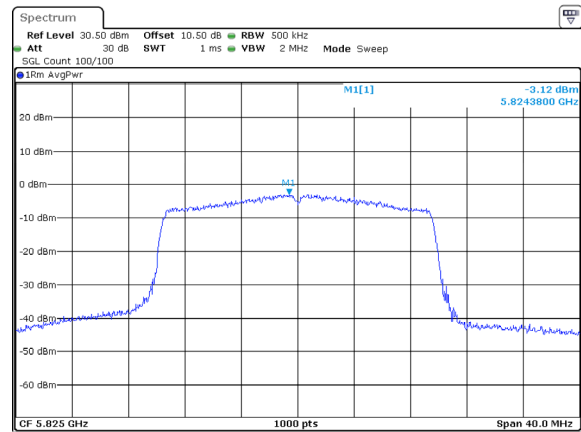
ProjectNo.:2401T33438E-RF Tester:Brian Li  
Date: 1.APR.2025 23:38:59

802.11ax20\_5785MHz\_RU\_Full\_Chain 2



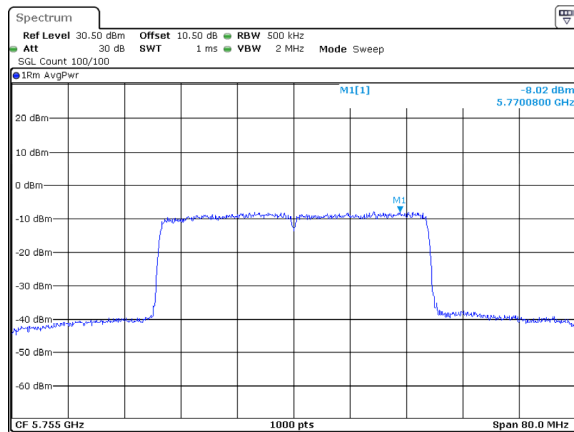
ProjectNo.:2401T33438E-RF Tester:Brian Li  
Date: 1.APR.2025 23:39:22

802.11ax20\_5825MHz\_RU\_Full\_Chain 2



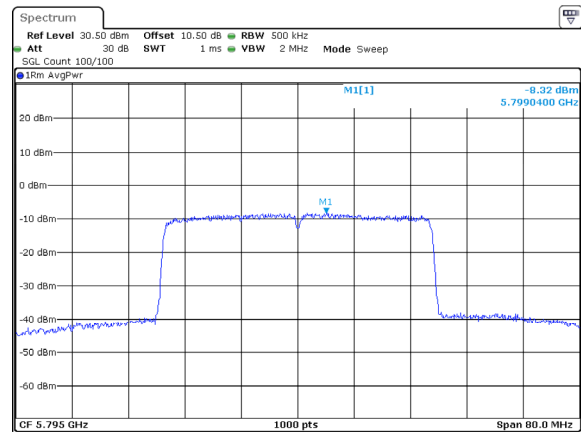
ProjectNo.:2401T33438E-RF Tester:Brian Li  
Date: 1.APR.2025 23:39:45

802.11ax40\_5755MHz\_RU\_Full\_Chain 1



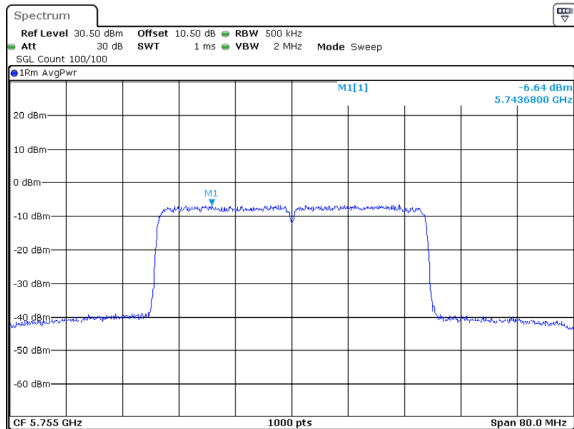
ProjectNo.:2401T33438E-RF Tester:Brian Li  
Date: 1.APR.2025 22:18:23

802.11ax40\_5795MHz\_RU\_Full\_Chain 1

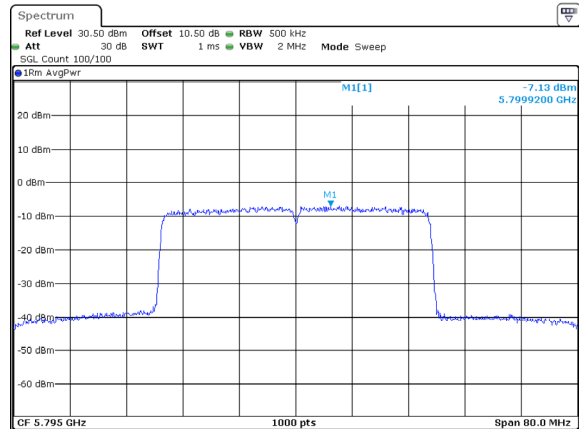


ProjectNo.:2401T33438E-RF Tester:Brian Li  
Date: 1.APR.2025 22:20:40

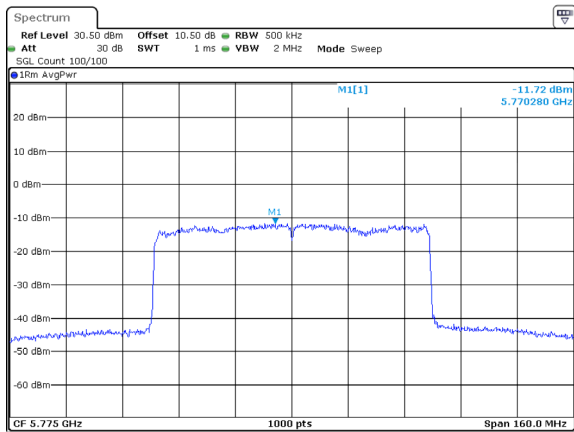
802.11ax40\_5755MHz\_RU\_Full\_Chain 2



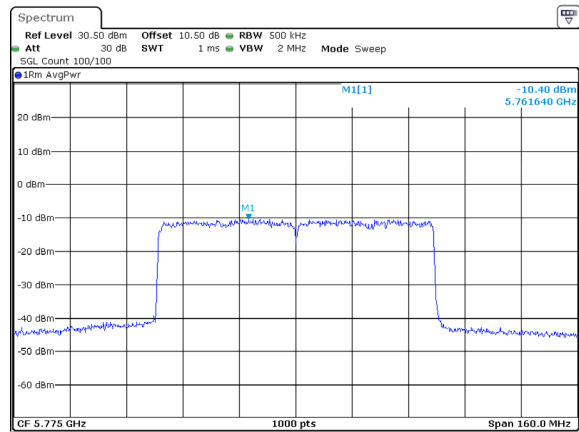
802.11ax40\_5795MHz\_RU\_Full\_Chain 2



802.11ax80\_5775MHz\_RU\_Full\_Chain 1



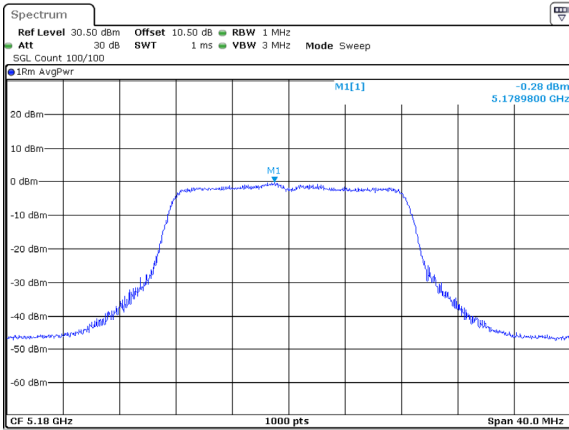
802.11ax80\_5775MHz\_RU\_Full\_Chain 2



For module YL7981

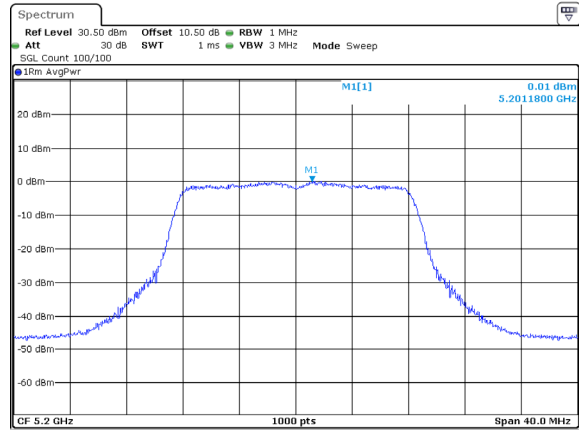
5150-5250MHz

802.11a\_5180MHz\_Chain 1



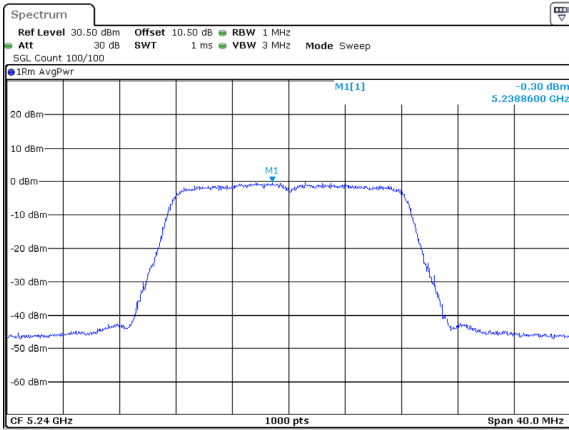
ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 2.APR.2025 00:11:44

802.11a\_5200MHz\_Chain 1



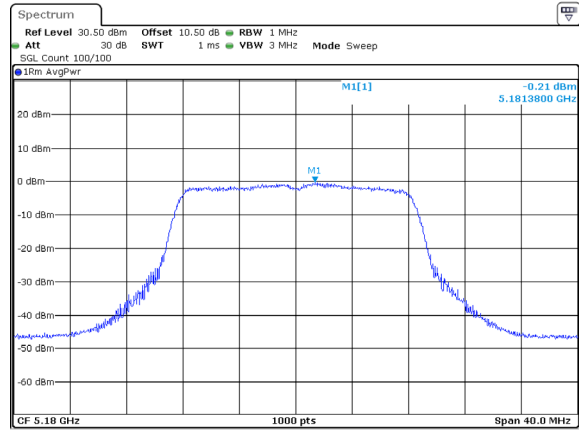
ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 1.APR.2025 23:50:38

802.11a\_5240MHz\_Chain 1



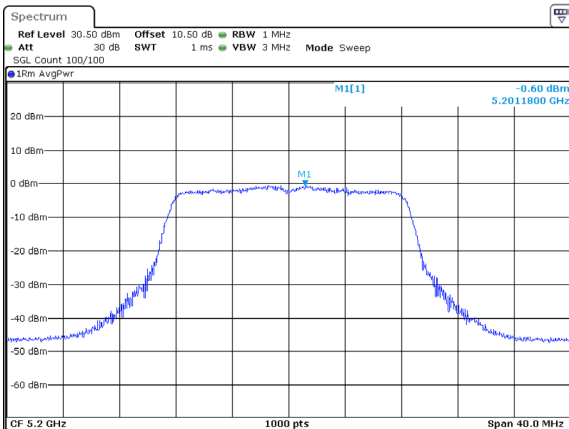
ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 1.APR.2025 23:50:58

802.11a\_5180MHz\_Chain 2



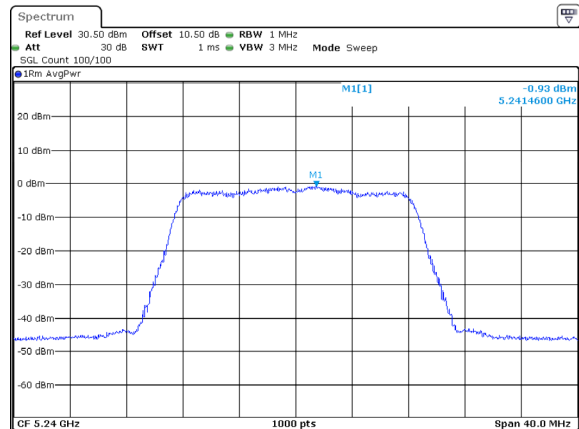
ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 2.APR.2025 00:13:21

802.11a\_5200MHz\_Chain 2



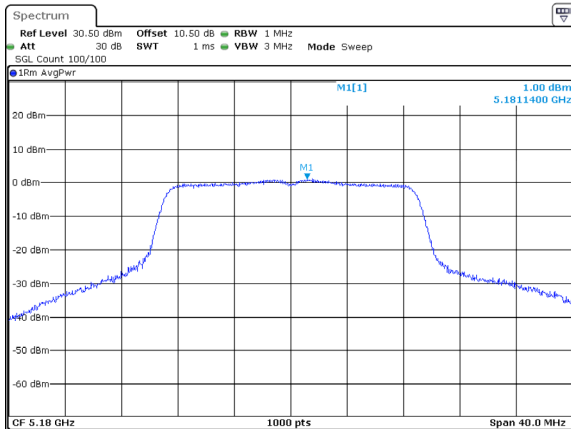
ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 2.APR.2025 00:14:05

802.11a\_5240MHz\_Chain 2



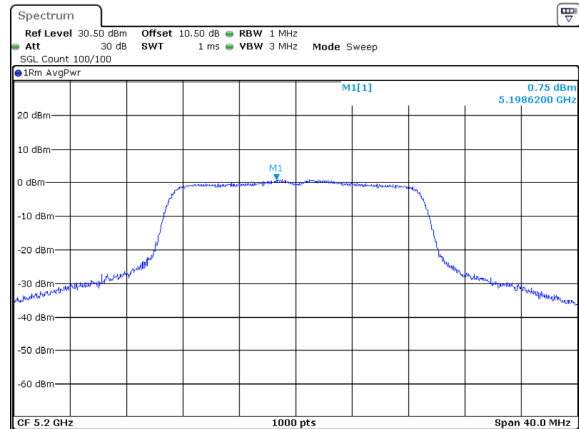
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Date: 2.APR.2025 00:14:30

802.11ac20\_5180MHz\_Chain 1



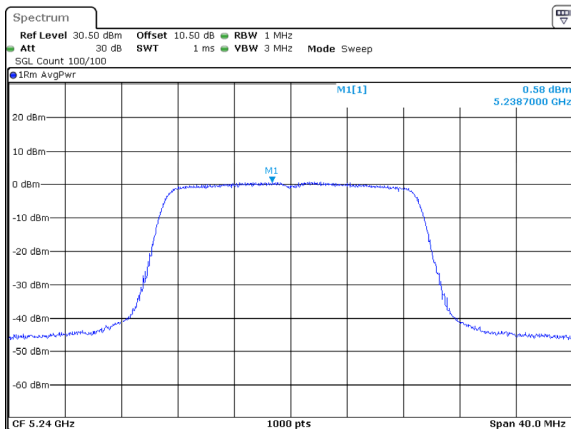
ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 1.APR.2025 23:52:10

802.11ac20\_5200MHz\_Chain 1



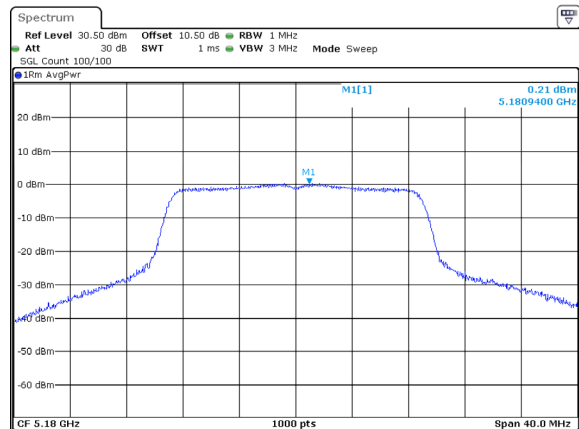
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Date: 1.APR.2025 23:53:05

802.11ac20\_5240MHz\_Chain 1



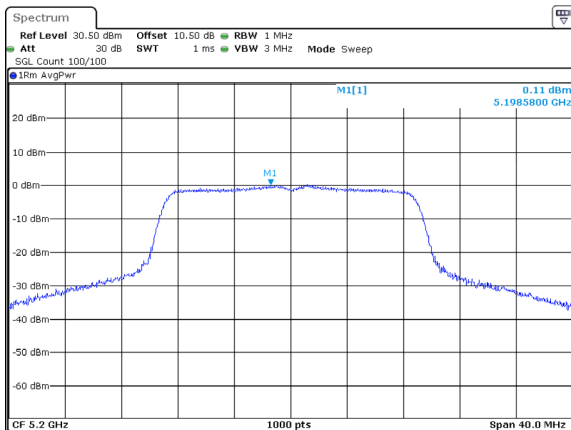
ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 1.APR.2025 23:55:02

802.11ac20\_5180MHz\_Chain 2



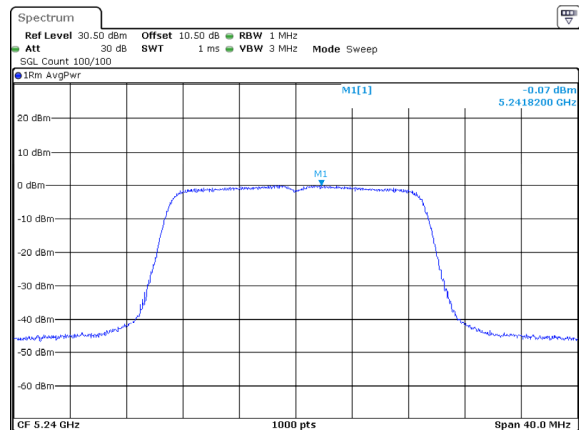
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Date: 2.APR.2025 00:16:02

802.11ac20\_5200MHz\_Chain 2



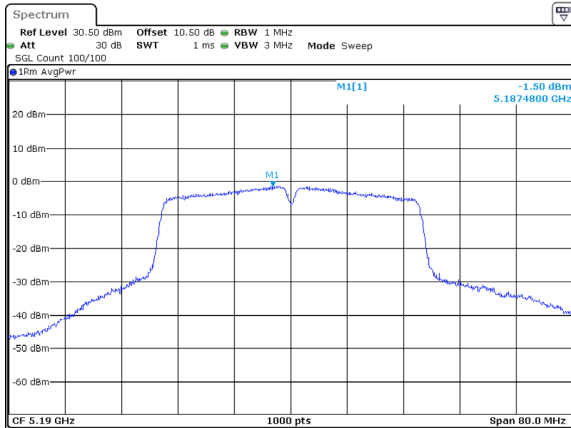
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Date: 2.APR.2025 00:17:17

802.11ac20\_5240MHz\_Chain 2



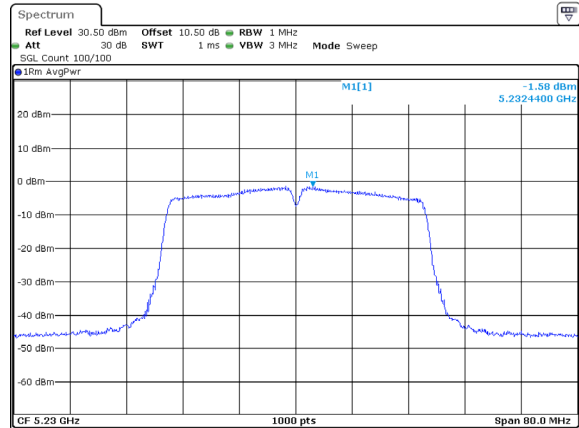
ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 2.APR.2025 00:19:41

802.11ac40\_5190MHz\_Chain 1



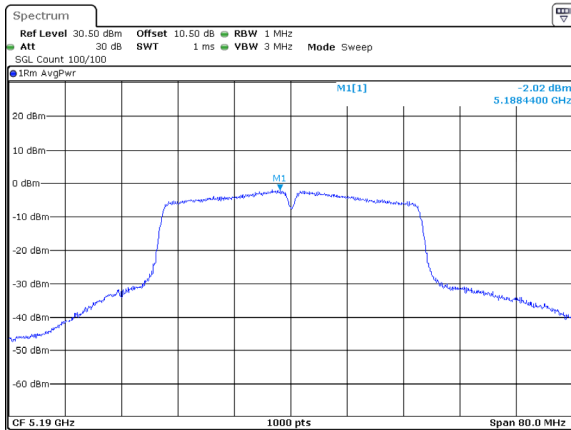
ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 1.APR.2025 23:55:55

802.11ac40\_5230MHz\_Chain 1



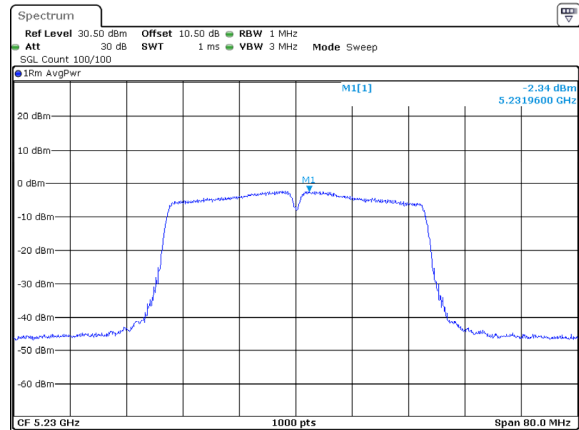
ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 1.APR.2025 23:57:10

802.11ac40\_5190MHz\_Chain 2



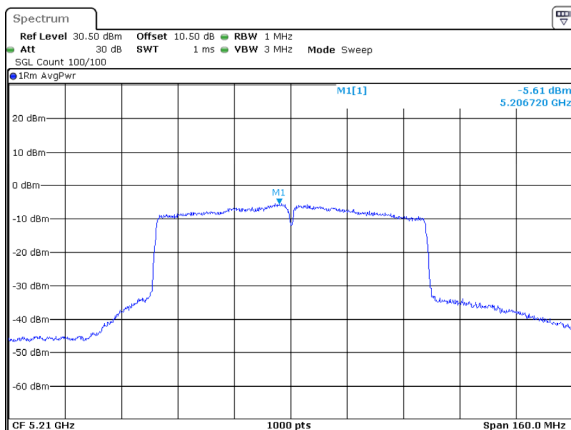
ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 2.APR.2025 00:20:36

802.11ac40\_5230MHz\_Chain 2



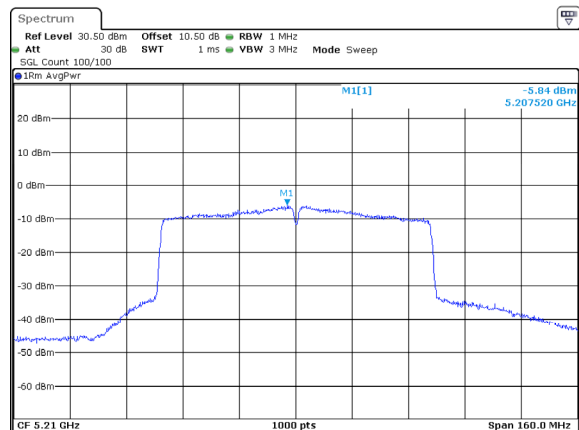
ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 2.APR.2025 00:21:44

802.11ac80\_5210MHz\_Chain 1



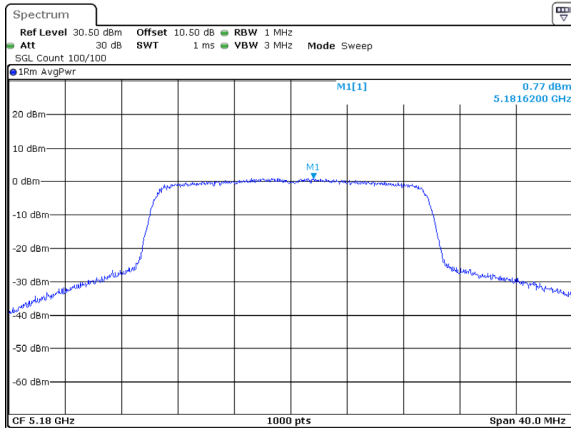
ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 1.APR.2025 23:59:14

802.11ac80\_5210MHz\_Chain 2

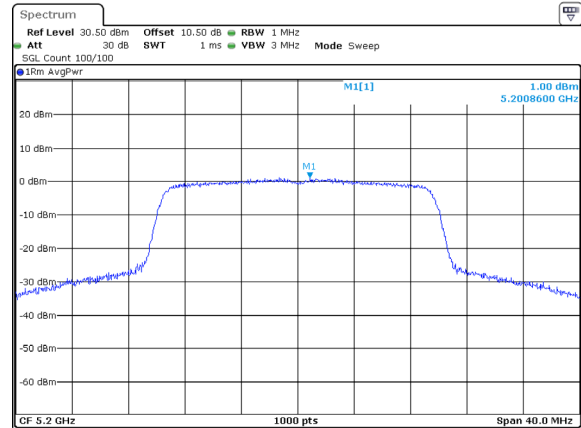


ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 2.APR.2025 00:23:40

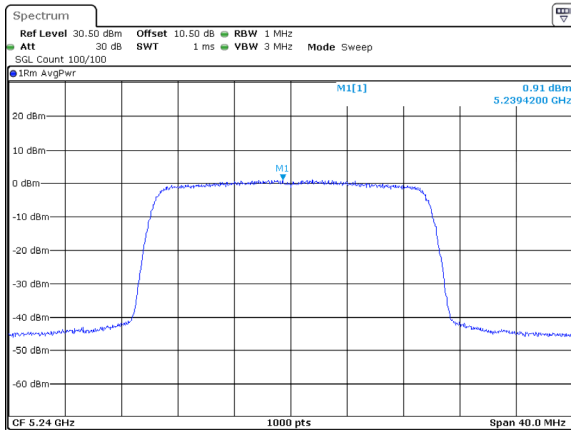
802.11ax20\_5180MHz\_RU\_Full\_Chain 1



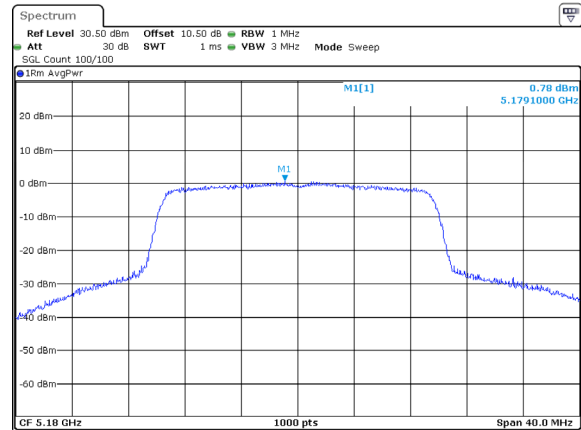
802.11ax20\_5200MHz\_RU\_Full\_Chain 1



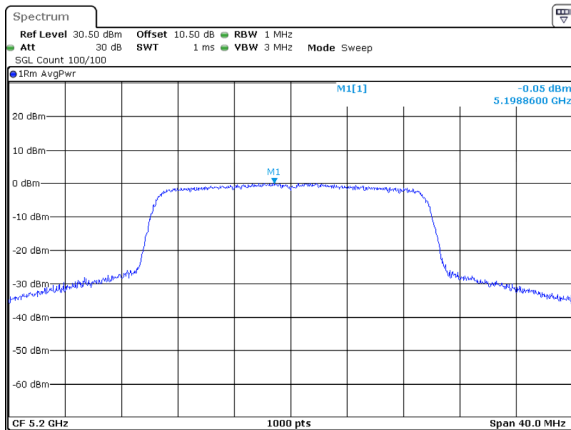
802.11ax20\_5240MHz\_RU\_Full\_Chain 1



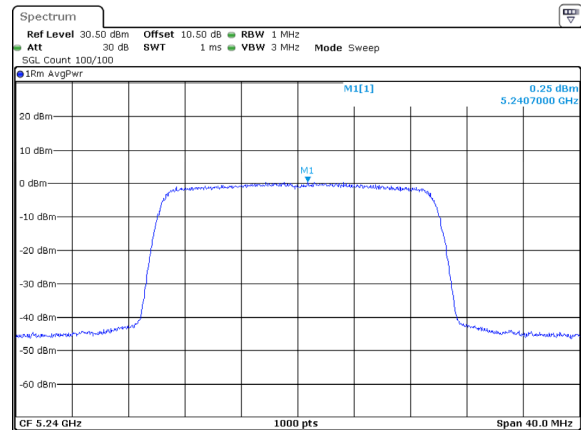
802.11ax20\_5180MHz\_RU\_Full\_Chain 2



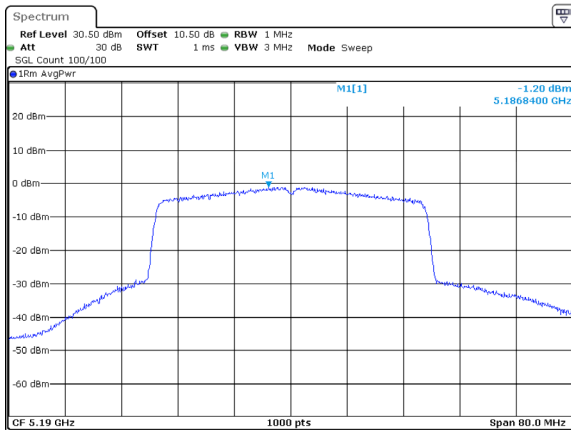
802.11ax20\_5200MHz\_RU\_Full\_Chain 2



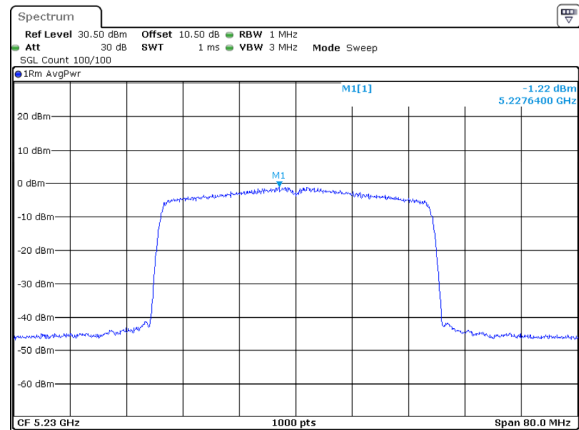
802.11ax20\_5240MHz\_RU\_Full\_Chain 2



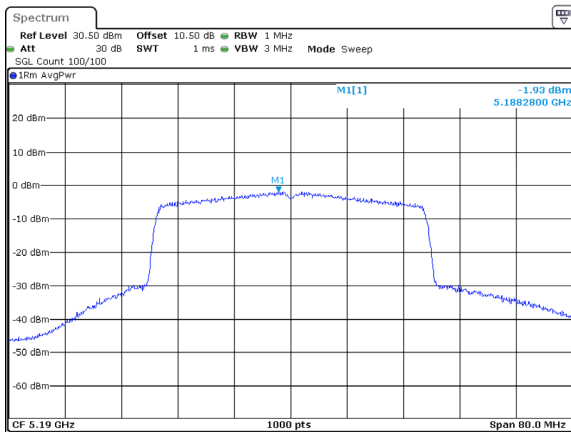
802.11ax40\_5190MHz\_RU\_Full\_Chain 1



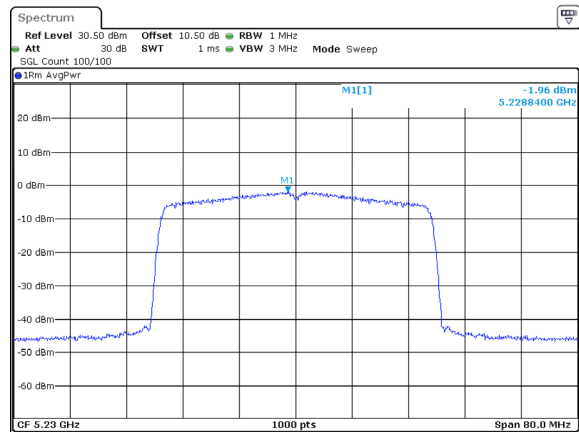
802.11ax40\_5230MHz\_RU\_Full\_Chain 1



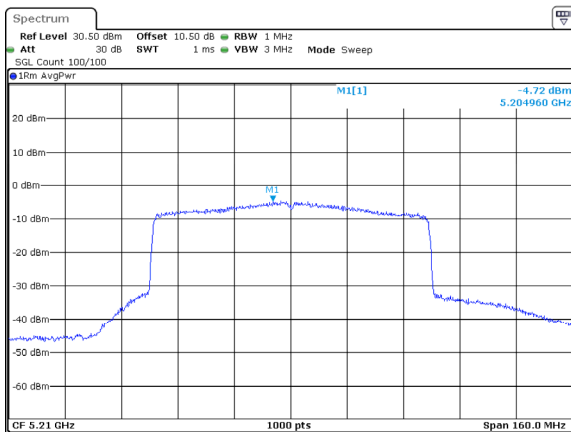
802.11ax40\_5190MHz\_RU\_Full\_Chain 2



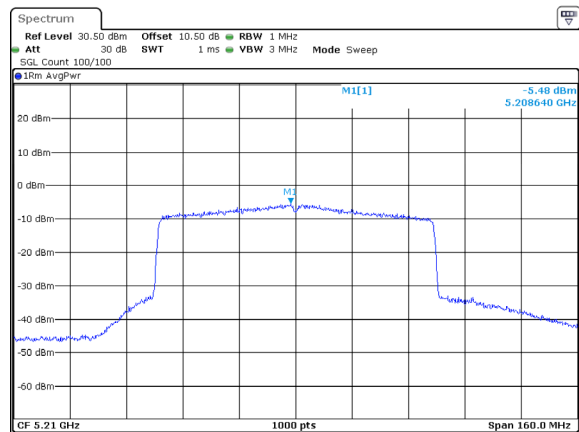
802.11ax40\_5230MHz\_RU\_Full\_Chain 2



802.11ax80\_5210MHz\_RU\_Full\_Chain 1



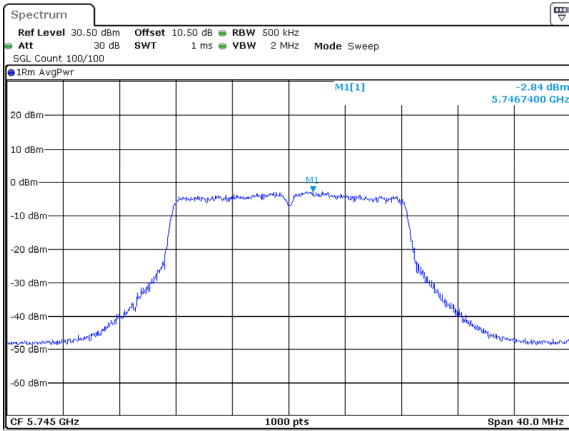
802.11ax80\_5210MHz\_RU\_Full\_Chain 2





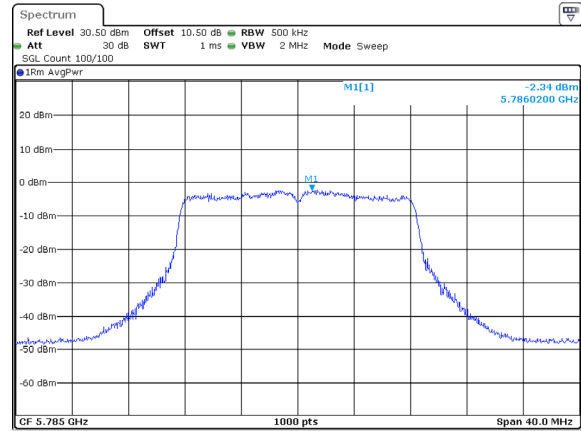
5725-5850MHz

802.11a\_5745MHz\_Chain 1



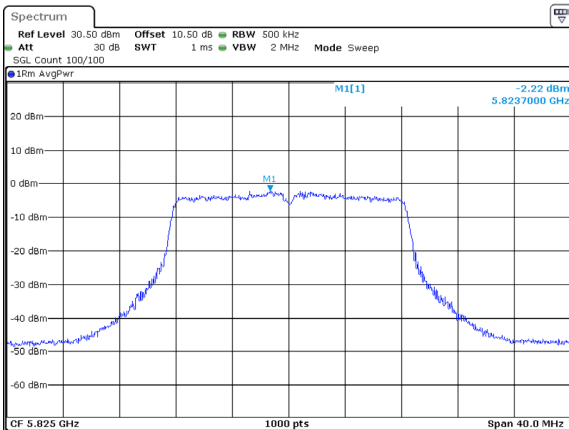
ProjectNo.:2401T33438E-RF-1 Tester:Brian LI  
Date: 2.APR.2025 00:03:05

802.11a\_5785MHz\_Chain 1



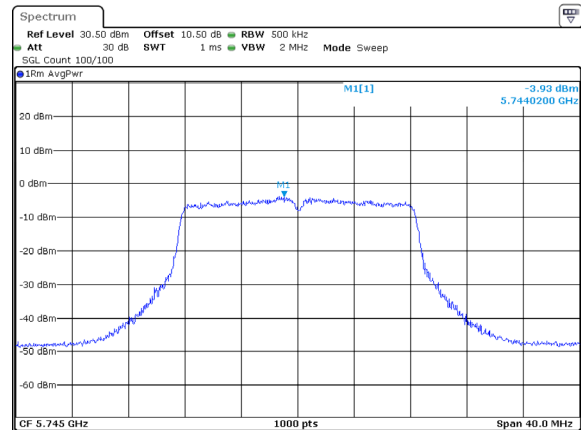
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Date: 2.APR.2025 00:03:24

802.11a\_5825MHz\_Chain 1



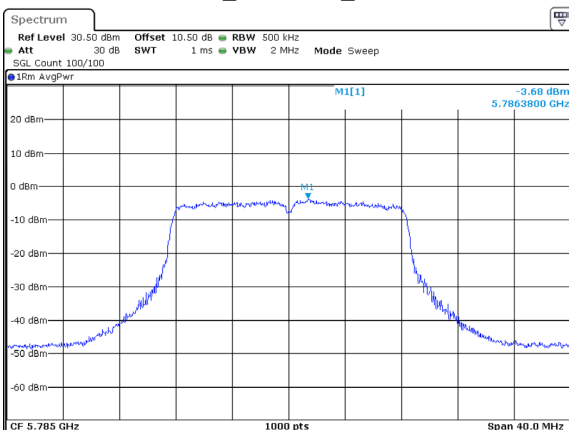
ProjectNo.:2401T33438E-RF-1 Tester:Brian LI  
Date: 2.APR.2025 00:03:56

802.11a\_5745MHz\_Chain 2



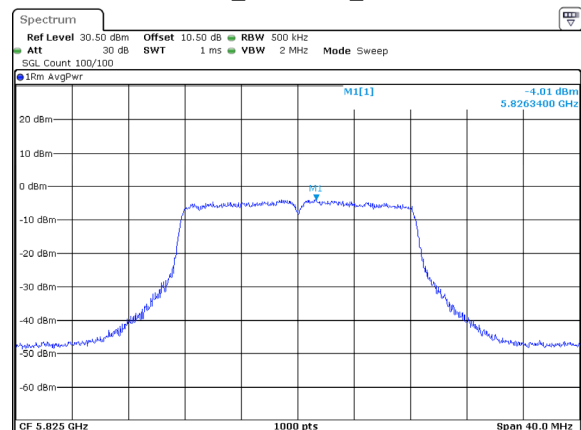
ProjectNo.:2401T33438E-RF-1 Tester:Brian LI  
Date: 2.APR.2025 00:30:56

802.11a\_5785MHz\_Chain 2



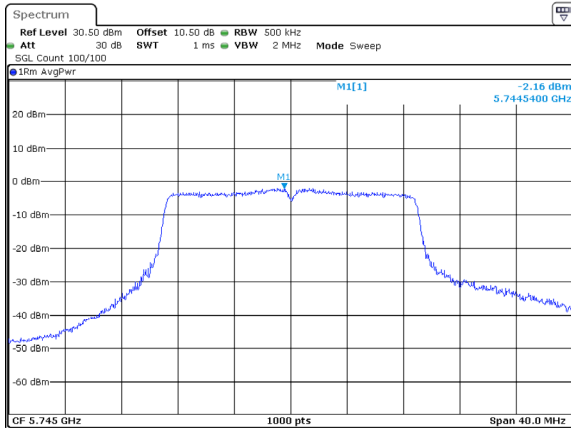
ProjectNo.:2401T33438E-RF-1 Tester:Brian LI  
Date: 2.APR.2025 00:31:22

802.11a\_5825MHz\_Chain 2



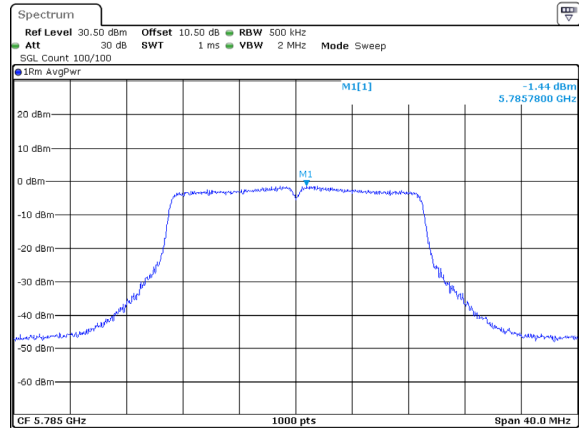
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Date: 2.APR.2025 00:32:01

802.11ac20\_5745MHz\_Chain 1



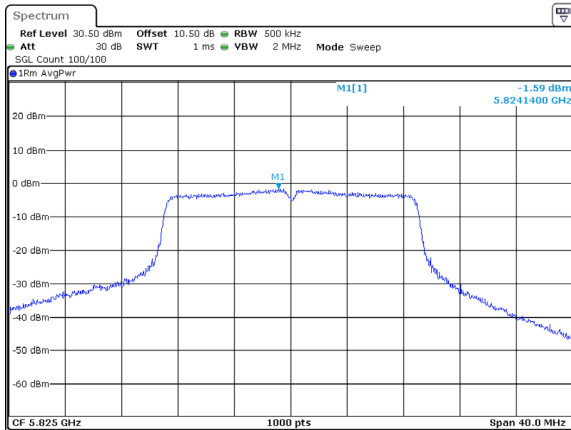
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Date: 2.APR.2025 00:04:25

802.11ac20\_5785MHz\_Chain 1



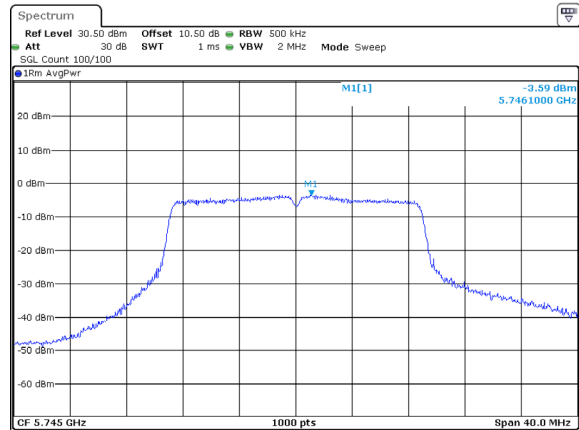
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802.11ac20\_5825MHz\_Chain 1



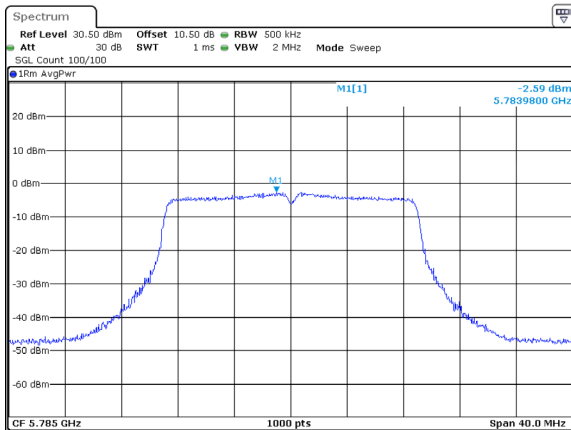
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Date: 2.APR.2025 00:05:16

802.11ac20\_5745MHz\_Chain 2



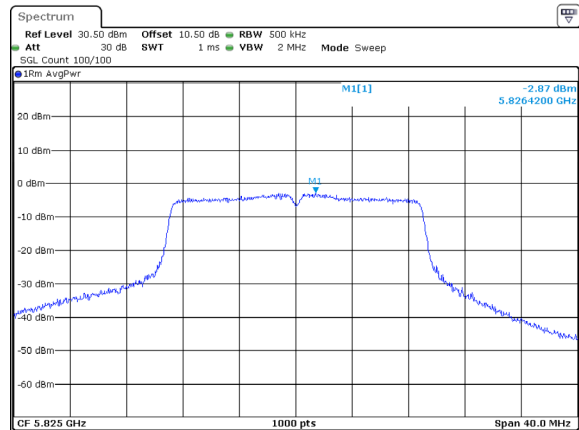
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Date: 2.APR.2025 00:32:49

802.11ac20\_5785MHz\_Chain 2



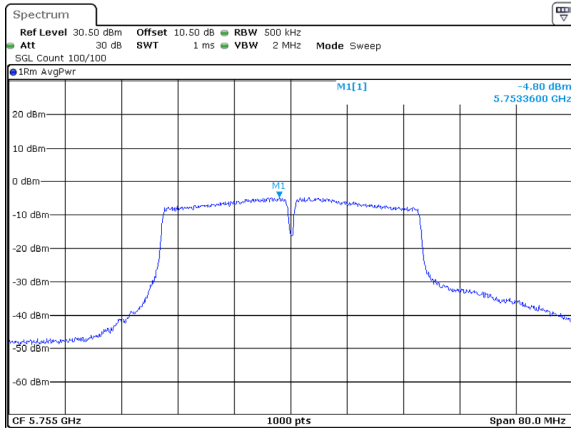
ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 2.APR.2025 00:33:21

802.11ac20\_5825MHz\_Chain 2



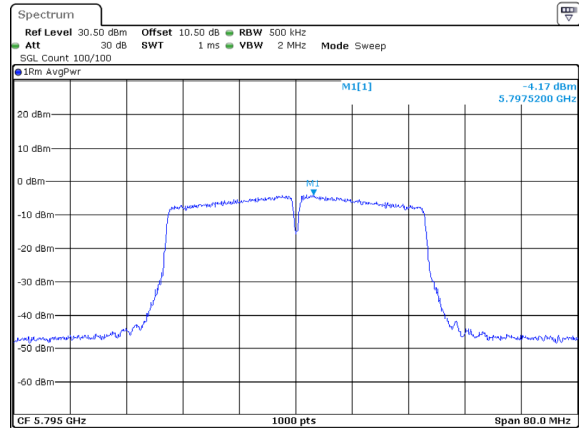
ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 2.APR.2025 00:33:41

802.11ac40\_5755MHz\_Chain 1



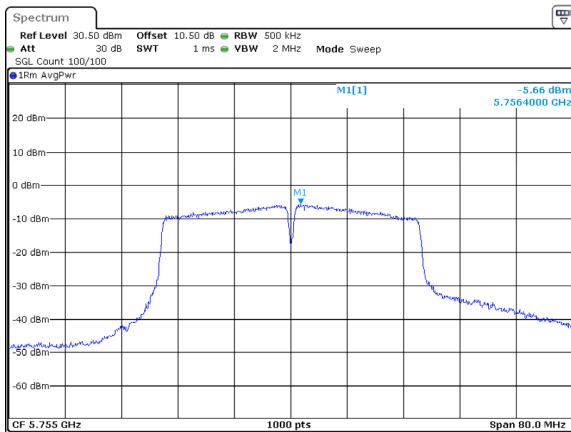
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Date: 2.APR.2025 00:05:52

802.11ac40\_5795MHz\_Chain 1



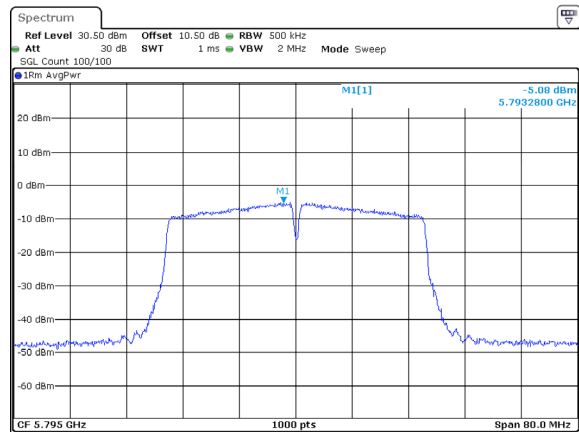
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Date: 2.APR.2025 00:06:11

802.11ac40\_5755MHz\_Chain 2



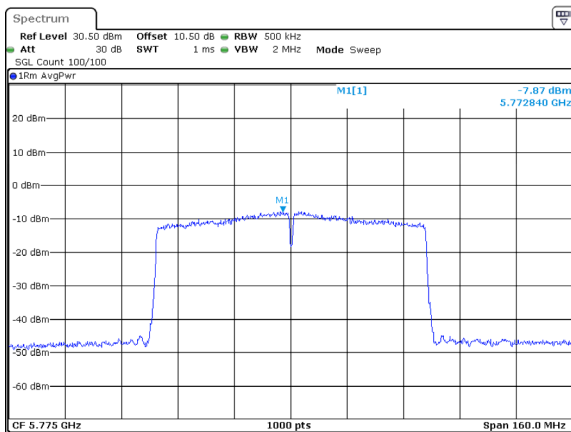
ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 2.APR.2025 00:34:02

802.11ac40\_5795MHz\_Chain 2



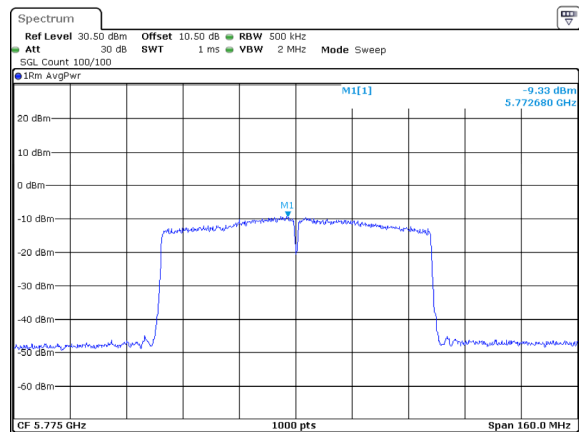
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Date: 2.APR.2025 00:34:24

802.11ac80\_5775MHz\_Chain 1



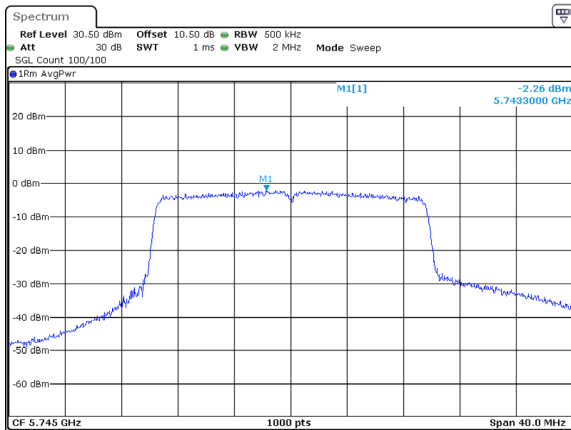
ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 2.APR.2025 00:06:44

802.11ac80\_5775MHz\_Chain 2



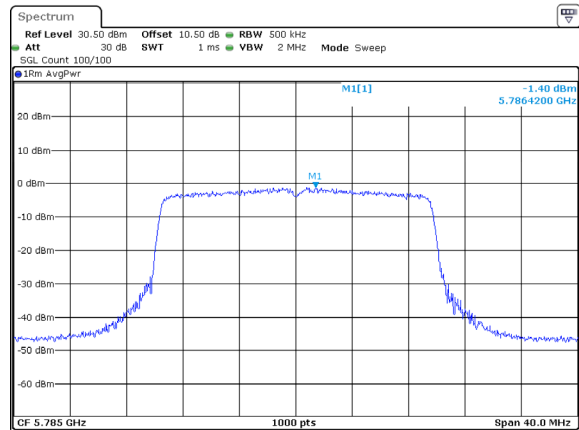
ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 2.APR.2025 00:34:47

802.11ax20\_5745MHz\_RU\_Full\_Chain 1



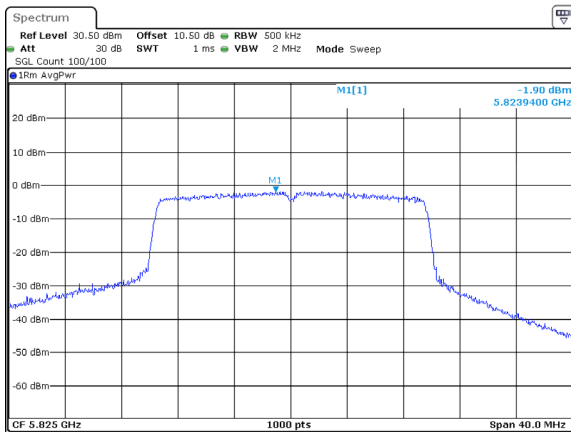
ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 2.APR.2025 00:07:33

802.11ax20\_5785MHz\_RU\_Full\_Chain 1



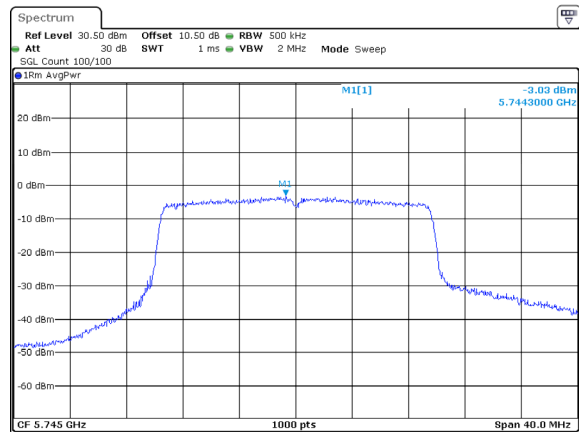
ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 2.APR.2025 00:07:52

802.11ax20\_5825MHz\_RU\_Full\_Chain 1



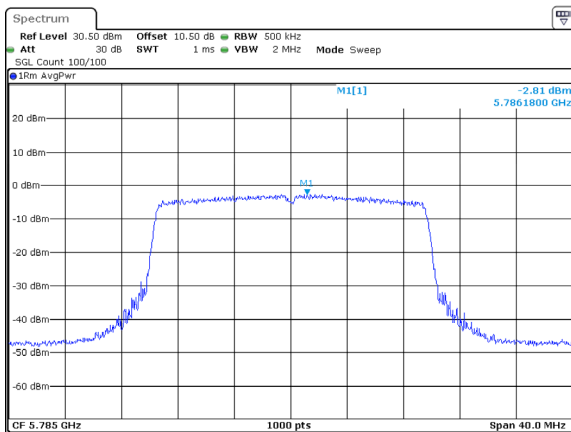
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Date: 2.APR.2025 00:08:10

802.11ax20\_5745MHz\_RU\_Full\_Chain 2



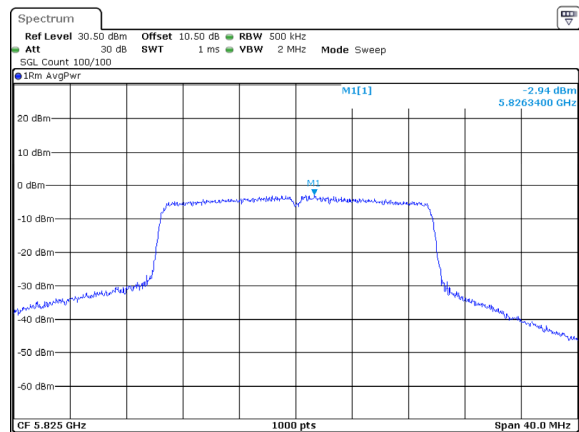
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802.11ax20\_5785MHz\_RU\_Full\_Chain 2



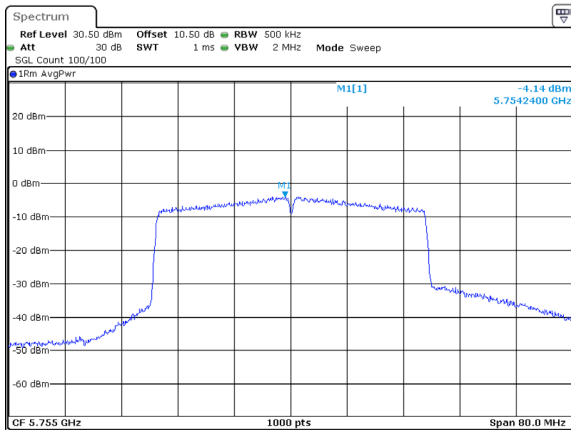
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Date: 2.APR.2025 00:27:20

802.11ax20\_5825MHz\_RU\_Full\_Chain 2

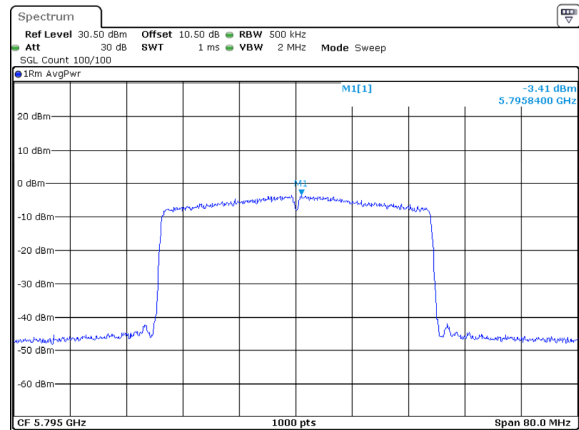


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Date: 2.APR.2025 00:27:45

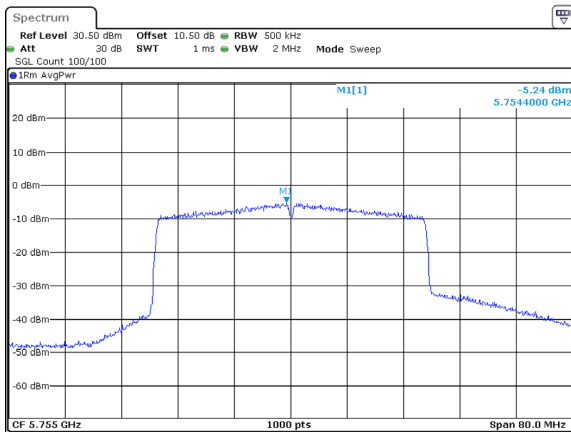
802.11ax40\_5755MHz\_RU\_Full\_Chain 1



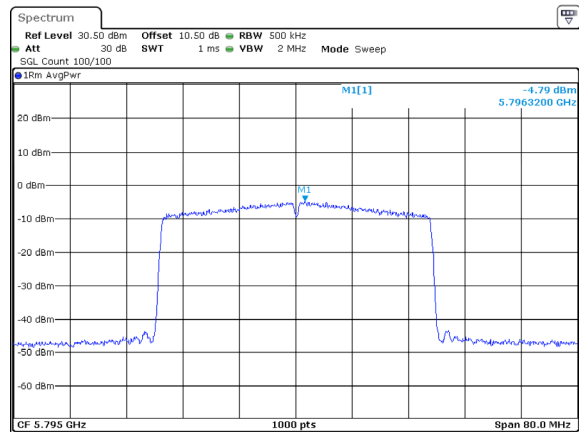
802.11ax40\_5795MHz\_RU\_Full\_Chain 1



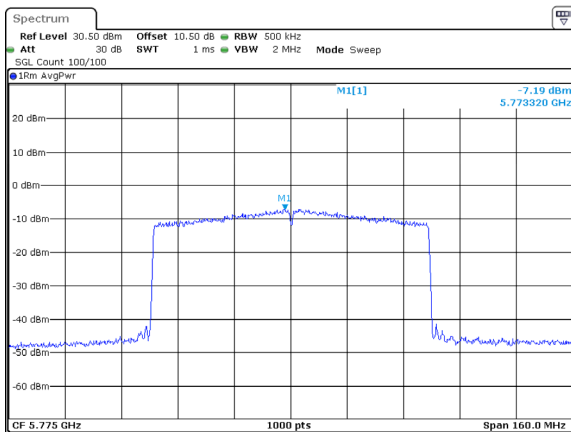
802.11ax40\_5755MHz\_RU\_Full\_Chain 2



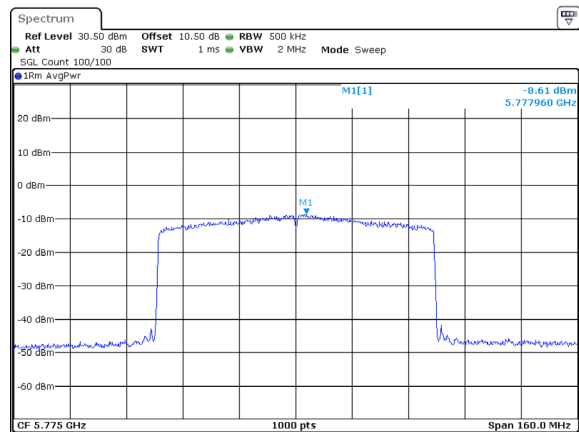
802.11ax40\_5795MHz\_RU\_Full\_Chain 2



802.11ax80\_5775MHz\_RU\_Full\_Chain 1



802.11ax80\_5775MHz\_RU\_Full\_Chain 2



**Duty Cycle**

**Test Information:**

<b>Sample No.:</b>	2L54-1	<b>Test Date:</b>	2025/03/05~2025/03/06
<b>Test Site:</b>	RF	<b>Test Mode:</b>	Transmitting
<b>Tester:</b>	Brian Li	<b>Test Result:</b>	Pass

**Environmental Conditions:**

<b>Temperature:</b> (°C)	25	<b>Relative Humidity:</b> (%)	47	<b>ATM Pressure:</b> (kPa)	101
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**Test Data:****For module YL43752**

Mode	Antenna	Test Frequency (MHz)	Ton (ms)	Ton+Toff (ms)	Duty Cycle (%)	Duty Cycle Factor(dB)	1/Ton (Hz)	VBW Setting (kHz)
802.11a	Chain 1	5200	<b>1.389</b>	1.502	92.48	0.34	720	1
802.11ac20	Chain 1	5200	1.307	1.416	92.30	0.35	765	1
802.11ac40	Chain 1	5190	0.649	0.756	85.85	0.66	1541	2
802.11ac80	Chain 1	5210	0.319	0.421	75.77	1.21	3135	5
802.11ax20_RU_Full	Chain 1	5200	1.020	1.120	91.07	0.41	980	1
802.11ax40_RU_Full	Chain 1	5190	0.533	0.638	83.54	0.78	1876	2
802.11ax80_RU_Full	Chain 1	5210	0.286	0.387	73.90	1.31	3497	5

$$\text{Duty Cycle} = \text{Ton}/(\text{Ton}+\text{Toff}) * 100\%$$

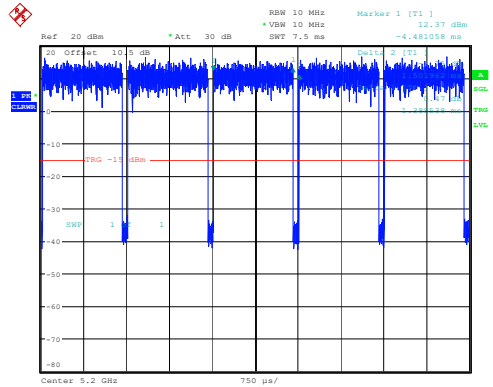
**For module YL7981**

Mode	Test Frequency (MHz)	Ton (ms)	Ton+Toff (ms)	Duty Cycle (%)	Duty Cycle Factor(dB)	1/Ton (Hz)	VBW Setting (kHz)
802.11a	5200	0.190	0.248	76.61	1.16	5263	10
802.11ac20	5200	1.319	1.378	95.72	0.19	758	1
802.11ac40	5190	0.656	0.713	92.01	0.36	1524	2
802.11ac80	5210	0.323	0.382	84.55	0.73	3096	5
802.11ax20_RU_Full	5200	<b>3.893</b>	3.952	98.51	/	/	0.010
802.11ax40_RU_Full	5190	1.973	2.032	97.10	0.13	507	1
802.11ax80_RU_Full	5210	0.936	1.035	90.43	0.44	1068	2

$$\text{Duty Cycle} = \text{Ton}/(\text{Ton}+\text{Toff}) * 100\%$$

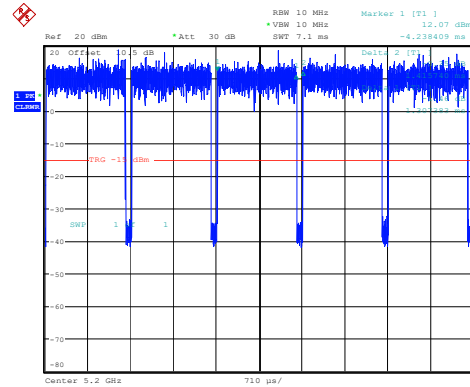
For module YL43752

802.11a\_5200MHz\_Chain 1



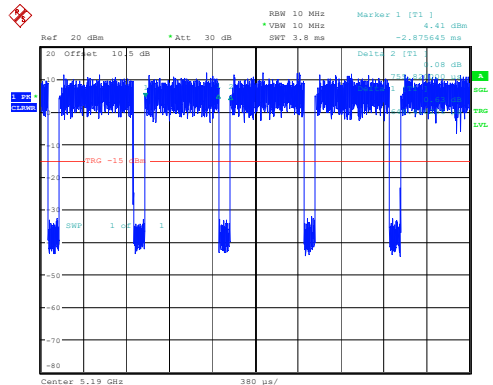
ProjectNo.:2401T33438E-RF Tester:Brian Li  
Date: 5.MAR.2025 13:29:25

802.11ac20\_5200MHz\_Chain 1



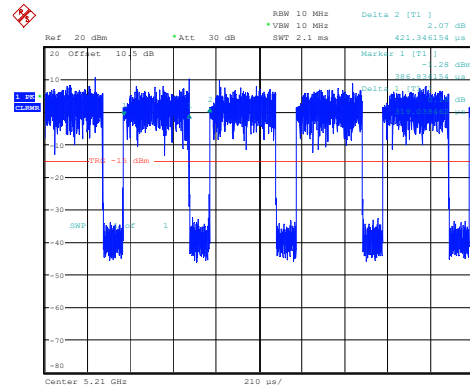
ProjectNo.:2401T33438E-RF Tester:Brian Li  
Date: 5.MAR.2025 13:40:08

802.11ac40\_5190MHz\_Chain 1



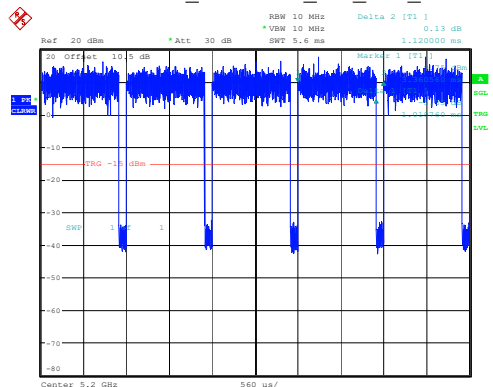
ProjectNo.:2401T33438E-RF Tester:Brian Li  
Date: 5.MAR.2025 13:41:49

802.11ac80\_5210MHz\_Chain 1



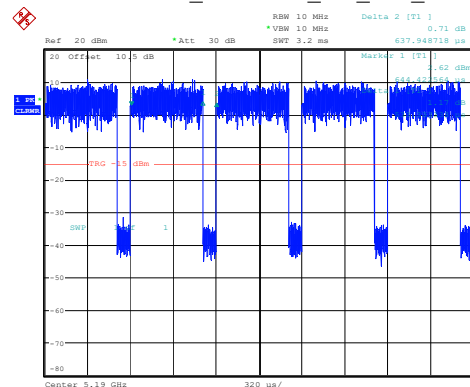
ProjectNo.:2401T33438E-RF Tester:Brian Li  
Date: 5.MAR.2025 13:46:14

802.11ax20\_5200MHz\_RU\_Full\_Chain 1



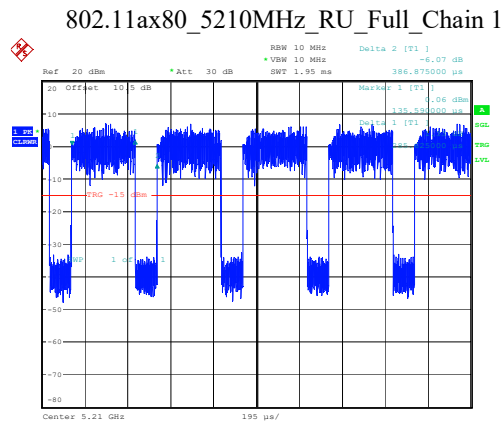
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Date: 5.MAR.2025 13:46:53

802.11ax40\_5190MHz\_RU\_Full\_Chain 1



ProjectNo.:2401T33438E-RF Tester:Brian Li  
Date: 5.MAR.2025 13:47:47

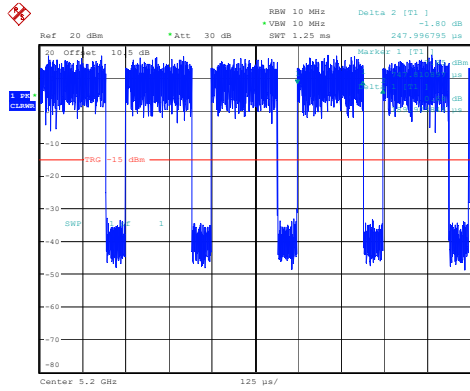




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Date: 5.MAR.2025 13:49:13

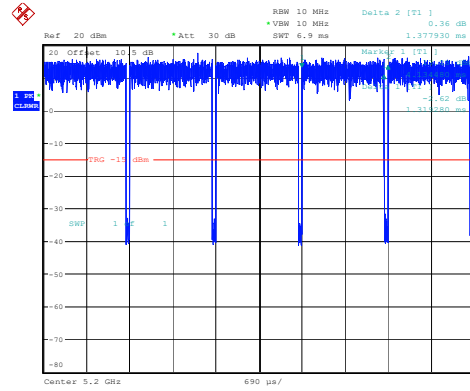
For module YL7981

802.11a\_5200MHz



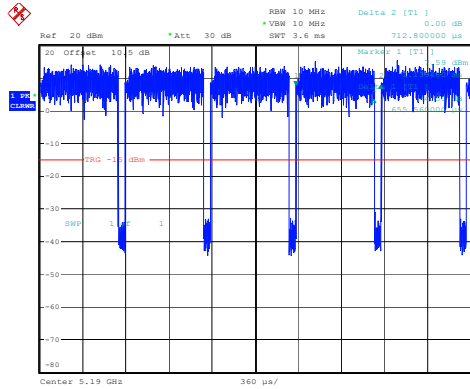
ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 6.MAR.2025 12:10:02

802.11ac20\_5200MHz



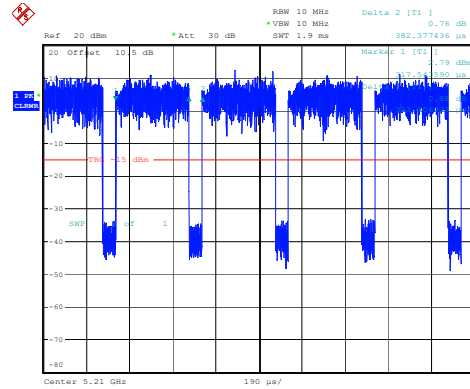
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Date: 6.MAR.2025 12:12:40

802.11ac40\_5190MHz



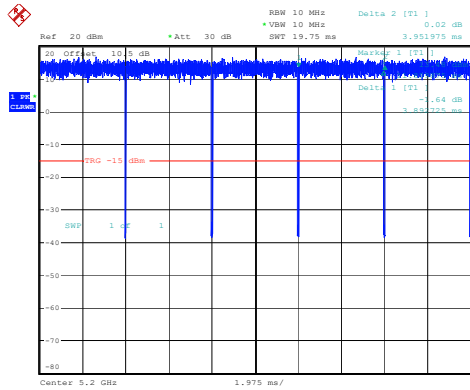
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Date: 6.MAR.2025 12:13:05

802.11ac80\_5210MHz



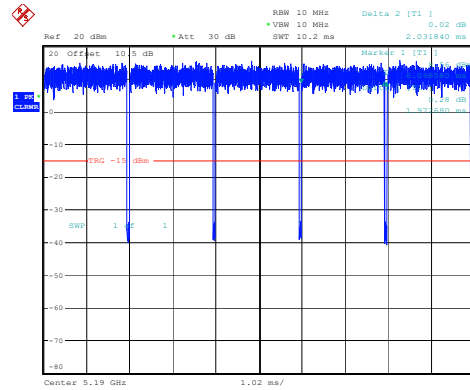
ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 6.MAR.2025 12:16:13

802.11ax20\_5200MHz\_RU\_Full



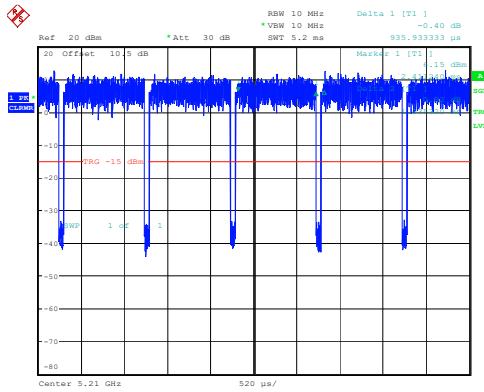
ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 6.MAR.2025 12:18:18

802.11ax40\_5190MHz\_RU\_Full



ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 6.MAR.2025 12:19:04

### 802.11ax80\_5210MHz\_RU\_Full



ProjectNo.:2401T33438E-RF-1 Tester:Brian Li  
Date: 6.MAR.2025 12:21:47

## RF EXPOSURE EVALUATION

### MPE-Based Exemption

#### Applicable Standard

According to subpart 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

According to KDB 447498 D04 v01 Interim General RF Exposure Guidance

#### MPE-Based Exemption:

General frequency and separation-distance dependent MPE-based effective radiated power(ERP) thresholds are in Table B.1 [Table 1 of § 1.1307(b)(3)(i)(C)] to support an exemption from further evaluation from 300 kHz through 100 GHz.

Table 1 to § 1.1307(b)(3)(i)(C) - Single RF Sources Subject to Routine Environmental Evaluation

RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	1,920 R <sup>2</sup> .
1.34-30	3,450 R <sup>2</sup> /f <sup>2</sup> .
30-300	3.83 R <sup>2</sup> .
300-1,500	0.0128 R <sup>2</sup> f.
1,500-100,000	19.2R <sup>2</sup> .

R is the minimum separation distance in meters

f = frequency in MHz

For multiple RF sources: Multiple RF sources are exempt if:

in the case of fixed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation:

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

**Result**

Mode	Frequency (MHz)	Tune up conducted power <sup>#</sup> (dBm)	Antenna Gain <sup>#</sup>		ERP		Evaluation Distance (m)	ERP Limit (mW)
			(dBi)	(dBd)	(dBm)	(mW)		
<b>For module YL43752</b>								
BLE	2402-2480	7.0	3.18	1.03	8.03	6.35	0.2	768
2.4G Wi-Fi	2412-2462	23.5	3.18	1.03	24.53	283.79	0.2	768
5.2G Wi-Fi	5180-5240	11.0	5.57	3.42	14.42	27.67	0.2	768
5.3G Wi-Fi	5260-5320	12.0	5.57	3.42	15.42	34.83	0.2	768
5.6G Wi-Fi	5500-5720	11.0	5.57	3.42	14.42	27.67	0.2	768
5.8G Wi-Fi	5745-5825	12.0	5.57	3.42	15.42	34.83	0.2	768
<b>For module YL7981</b>								
5.2G Wi-Fi	5180-5240	13.0	5.57	3.42	16.42	43.85	0.2	768
5.8G Wi-Fi	5745-5825	13.0	5.57	3.42	16.42	43.85	0.2	768

- Note: 1. The tune up conducted power and antenna gain was declared by the applicant.  
 2. 0dBd=2.15dBi  
 3. The BLE and Wi-Fi can transmit at same time, the 2.4G and 5G Wi-Fi cannot transmit at same time.  
 4. The two Wi-Fi modules can transmit as same time.

Simultaneous transmitting consideration (worst case):

The ratio=  $ERP_{BLE}/limit + ERP_{2.4G\ Wi-Fi}/limit + ERP_{5G\ (module\ YL7981)}/limit = 6.35/768 + 283.79/768 + 43.85/768 = 0.43 < 1.0$

So simultaneous exposure is compliant.

To maintain compliance with the FCC’s RF exposure guidelines, place the equipment at least 20cm from nearby persons.

**Result: Compliant**

## **EUT PHOTOGRAPHS**

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Please refer to the attachment 2401T33438E-RF External photo and 2401T33438E-RF Internal photo.

## **TEST SETUP PHOTOGRAPHS**

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Please refer to the attachment 2401T33438E-RF-00B Test Setup photo.

**\*\*\*\*\* END OF REPORT \*\*\*\*\***